REMARKS

Claims **1-14** are pending. Reconsideration and timely withdrawal of the pending rejections is respectfully requested for the reasons discussed below.

Drawings

Applicants appreciate the indication that the drawings submitted **April 22, 2004** are accepted.

Information Disclosure Statement (IDS)

In response to the Examiner's comments at pages 2-3 of the Office Action, Applicants enclose herewith an IDS listing the references cited at page 3, lines 18-22 and at page 5, lines 7-11 of Applicants' specification.

35 U.S.C. § 103 Rejection

Claims **1-6** and **8-14** are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No.: 6,571,272 to Ferguson, *et al.* ("Ferguson") in view of U. S. Patent No.: 6,061,278 issued to Meade, *et al.* ("Meade"), and in further view of U.S. Patent No.: 6,331,983 to Haggerty, *et. al.* ("Haggerty"). Claim **7** is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ferguson in view of Mead, further in view of Haggerty, and further in view of Applicants' admitted prior art (AAPA). These rejections are respectfully traversed.

The claimed invention recites that a SNA request message is transmitted to a DLSw access node, which communicates with directory services that use a spanning tree to locate a

resource designated in the SNA request message. In embodiments, the SNA request message has an address identifying the target SNA node for requesting the establishment of a SNA connection with the target SNA node. Consequently, the SNA request message and the directory service queries are NOT explorer frames as disclosed by Ferguson and as suggested by the Examiner. In fact, Applicants note that the DLSw protocols used by the claimed invention *do not* require (a) sending of explorer frames, (b) the implementation of a full TCP/IP stack within DLSw nodes, or (c) the implementation of DLSw partner tables within DLSw nodes. (*See*, Applicants' Specification, page 10, lines 19-23.) As stated in the specification, the motivation of sending SNA request messages to DLSw access nodes is intended to avoid the complexities associated with (a) sending multiple individual explorer frames, (b) storing DLSw partner tables in each DLSw node, and (c) implementing a full TCP/IP stack in each DLSw node.[1] These and other distinctions over the prior art were fully explained in Applicants' Reply of March 4, 2004.

For example, at page 10, paragraph 2, of the Reply, Applicants pointed out that both Ferguson and Meade only disclose that a SNA source will directly contact a destination SNA node. Consequently, Ferguson and Meade both require the SNA source to transmit an explorer frame directly to a SNA destination. As previously stated, such teachings are contrary the claimed invention, especially in view of Applicants' specification which makes abundantly clear that the claimed invention (i) does not require explorer frames and (ii) that the claimed SNA request message is not an explorer frame.

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[1] These novel and distinguishable improvements over the prior art are clearly stated in Applicants' specification, for example, at page 10, lines 19-23; page 16, lines 22-27; page 18, lines 14-16; and page 19, lines 12-22.

As another example, at page 12, paragraph 3 of the March 4, 2004 Reply, Applicants pointed out that the Haggerty reference fails to disclose (i) a SNA request message sent to a DLSw access node or (ii) an undirected query sent from the DLSw access node to a spanning tree.

Respectfully, though, the Examiner seems to continually equate the SNA request message with the explorer frames disclosed by Ferguson. Specifically, the Examiner maintains that Ferguson shows:

> receiving from a source SNA node a first SNA request message having an address identifying the target SNA node for requesting the establishment of a SNA connection with the target SNA node (col. 2, line 52-col. 6, line 16, esp. col. 3, lines 26-36; col. 4, lines 1-36; col. 4, line 64-col. 5, line 24; and col. 5, lines 36-48) *where a packet destined for a node on another network is taken to be a request for establishment of an SNA connection with a target SNA and where the "explorer frame" is used to discover a path to a destination such that it is implicit that a destination must be identified wherein the LLC2 network identifies nodes using addresses* (emphasis of Examiner's statement added to distinguish from Applicant's claim language).

However, the Examiner's statements do not appear to be accurate. The claimed invention operates by having a DLSw access node receive a SNA request message that specifies a particular resource. In one embodiment, the particular resource is another SNA node (i.e. target SNA node). After receiving the SNA request message (which, as discussed above, is not an explorer frame), the DLSw access node communicates with one or more directory services. In turn, the directory service(s) use a spanning tree to locate the resource that was designated in the SNA request message. Once the resource is located, a connection is established between the resource and the requesting SNA node.

This is a vastly different improvement over the conventional SNA architecture disclosed by the passages that the Examiner cited. For example, at col. 2, lines 52-67, of Ferguson, conventional SNA architecture is described as having three distinct phases: connection establishment, data transfer, and connection termination. During connection establishment, a single path or connection is established between the source and destination stations. As taught by Ferguson, an explorer frame is sent from a physical unit (source) to a host to establish a logical connection between the end stations. The host responds by sending an unnumbered acknowledgement frame back to the physical unit. Once this frame is received by the physical unit, a connection is established between the physical unit and the host. Clearly, Ferguson only shows a source directly contacting a destination unit, with no intermediaries, and with no use of a spanning tree. The claimed invention, by contrast, uses a DSLw access node as a first intermediary, and a layer of directory services that access a spanning tree as a second intermediary, between the source SNA node and the target SNA node. For these reasons, the features of independent claims 1, 8, and 9 are not shown by Ferguson.

The Examiner also asserts that the explorer frames taught by Ferguson have address information. This does not appear to be accurate. Instead, the explorer frames are blank, and are transmitted by a source SNA to a network, and a destination host replies by transmitting a unnumbered acknowledgement (UA) frame back to the source SNA. Receipt of the UA frame enables the source SNA to establish a connection with the host.

In addition, the Examiner is of the opinion that

> at said source DLSw access node, locating a target DLSw access node providing access to the target SNA node, sending an undirected query over the spanning tree (col. 2, line 52-col. 6, line 16, esp. col. 3, lines 17-37 and col. 4, lines 1-36) *where this is implicit since it is*

> *necessary in order to establish a connection between the source DLSw and the target DLSw* (emphasis added to distinguish Examiner's comments from the claim language).

However, this is not accurate. For example, the cited passages only disclose that conventional DLSw connects routers, and that different protocols are used to connect the routers to individual computers. For example, col. 3, lines 8-12 states that a network implementing DLSw is opposite a network that uses traditional bridging. For example, a LLC2 connection in a DLSw network terminates at a local DLSw device entity, instead of being end-to-end as in a network that uses traditional bridging. Furthermore, the passages cited by the Examiner state that the relationships formed between DLSw routers are "peer-to-peer," and that such relationships are formed automatically upon "boot-up" of each DLSw router. In other words, as soon as a traditional DLSw router activates, it connects with its DLSw peer. The claimed invention, by contrast is linking SNA nodes end-to-end over a DSLw network. Consequently, locating a DLSw access node providing access to the target SNA node, and sending an undirected query over the spanning tree are each features that clearly distinguish over Ferguson's disclosures. Again, independent claims 1, 8, and 9 are distinguishable over Ferguson.

Lastly, the Examiner is of the opinion that

> .... at target DLSw access node providing access to the target SNA node, in response to the undirected query, sending to the source DLSw access node a reply message comprising addressing information of the target DLSw access node providing access to the target SNA node (col. 2, line 52-col. 6, line 16, esp. col. 3, lines 17-37 and col. 4, lines 1-36) *where it is implicit that addressing information is contained in a packet since packets are routed according to source and destination addresses*; establishing a. reserved or non reserved connection within the packet switching network between the source DLSw access node and the target DLSw access node (col. 2, line 52-col. 6, line 16, esp. col. 5. lines 25-48),

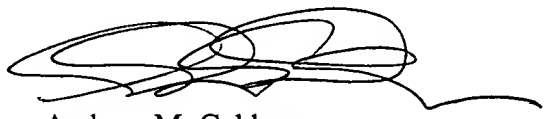
However, this is not accurate. For example, as explained, above, the conventional DLSw routers disclosed by Ferguson operate over automatically established peer-to-peer connections, have no way of knowing an address of a resource requested in a received SNA message, and normally have no need to relay address information back and forth. Consequently, the claimed invention is further distinguishable over Ferguson in that a target DLSw node that provides access to a target SNA node will, in response to an undirected query, send to a source DLSw node a reply message that includes, *inter alia*, appropriate addressing information. In doing this, the target DLSw node is stepping forward from a plurality of DLSw nodes in response to an undirected query and identifying itself as the appropriate conduit for communicating with the target SNA node. Nothing in Ferguson comes close to disclosing this feature, and once again, independent claims 1, 8, and 9 are distinguishable over Ferguson.

Claims 2-7 and 10-14 are allowable based on their dependencies from distinguishable base claims. Accordingly, the Examiner is requested to withdraw the rejection and pass claims 1-17 to issue.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants submit that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicants hereby make a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to **IBM Deposit Account No. 09-0457** (Endicott).

Respectfully submitted,



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Date: August 26, 2004

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